



United States Department of the Interior

U.S. Geological Survey

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November 14, 2019

To: Keunyea Song, SAM coordinator
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From: Richard W. Sheibley
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Subject: Final deliverables for JFA on site selection, logger deployment for 2020 sampling

Included with this memo are documents required under the Joint Funding Agreement (JFA) between the USGS and Ecology for the SAM small streams status and trends monitoring. According to the JFA, after completion of the round 2 site selection and level logger deployment for the 2020 sampling, the USGS is required to submit (1) a final site list with an explanation of what sites were dropped and why and (2) an email confirmation that all level loggers were deployed with a picture of the site.

For deliverable 1, a table of the original sites is included below along with the final site list. A brief statement of each change from the original list is included.

For deliverable 2, the USGS will submit a zipped file to Ecology with all site photos taken during the fall 2019 logger deployment through email. The logger deployments were completed in October 2019, with the final site installed on November 4, 2019.

Please feel free to contact me at any time with questions about this quarterly summary or any other project related issues.

Original list of SAM sites for 2020			
Label	long	lat	stream name
001-WUGA	-122.1706	47.56029	Coal Creek
002-WUGA	-122.3157	47.375533	McSorley Creek
003-WUGA	-122.1878	47.77913	North Creek
005-WUGA	-122.3335	47.253482	West Hylebos Creek
008-OUGA	-121.9383	47.24308	Unnamed tributary
009-WUGA	-122.2554	47.82499	Swamp Creek
026-OUGA	-123.4726	48.09051	Tumwater Creek
030-WUGA	-122.6321	47.65162	Unnamed tributary
034-WUGA	-122.1267	47.35755	Little Soos Creek
040-WUGA	-121.8367	47.53316	Kimball Creek
042-WUGA	-122.3668	47.32259	Unnamed tributary
048-WUGA	-122.2631	47.8035	Unnamed tributary
055-WUGA	-122.1856	47.64008	Yarrow Creek
065-WUGA	-122.2935	47.95027	Unnamed tributary
067-WUGA	-122.1168	47.36704	Little Soos Creek
069-OUGA	-121.8313	47.69437	Stossel Creek
074-WUGA	-122.3659	47.75397	Boeing Creek
079-WUGA	-121.9886	47.885264	Unnamed tributary
082-WUGA	-122.0427	47.54657	North Fork Issaquah Creek
087-WUGA	-123.0671	48.08485	Bell Creek
093-OUGA	-123.2612	48.05888	Pederson Creek
093-WUGA	-122.1798	47.5137	Honey Dew Creek
095-WUGA	-122.3249	47.4099	Des Moines Creek
098-OUGA	-121.8518	47.7285	Stossel Creek
100-OUGA	-122.8616	47.46879	Unnamed tributary
102-WUGA	-122.4833	48.71521	Padden Creek
104-OUGA	-122.6817	47.389153	Unnamed tributary
275-OUGA	-122.6162	47.314063	Wollochet at Natiello's
294-WUGA	-122.4661	47.130638	Morey Creek
367-WUGA	-122.4258	47.13097	Clover Creek
376-OUGA	-122.5816	47.285092	Sullivan Gulch Creek
396-OUGA	-122.6127	47.320599	Wollochet Creek
814-WUGA	-122.1518	47.685919	Unnamed tributary

The sites in bold red text were dropped during site evaluation because a basin was nested with another basin on the list, poor flow conditions, or denied access by landowner. When a site was dropped, it was replaced with the next one on the master sample list. Details are provided below.

- 067-WUGA – This site was nested with the basin from 034-WUGA and dropped. Recall that a recommendation from the final report from round 1 sampling in 2015 called for eliminating nested basins if possible. The upper basin was dropped in favor of 034-WUGA which corresponds with a long-term King County site that has a flow gage. It was replaced with 079-WUGA.
- 069-OUGA – This site was nested with the basin from 098-WUGA and dropped. Site 098-WUGA was the more downstream site with easier access. It was replaced with 083-OUGA.

- 100-OUGA – The hydrology of this site changed a lot since the 2015 sample and was now ponded with no flow. It was replaced with 009-OUGA.
- 275-WUGA – This site was sampled by Pierce County in 2015 and USGS was denied permission to access the site again. Access to site from other locations was not possible. It was replaced with 050-WUGA.
- 294-WUGA – This site was sampled by Pierce County in 2015 and in 2020 flow conditions changed a lot. USGS met landowner and was told it hasn't been flowing in a long time. More like a wetland than a stream. It was replaced with 158-WUGA.
- 367-WUGA – This site was sampled by Pierce County in 2015 and USGS was told it went dry shortly after they sampled it. This site was dropped because it didn't meet the condition of perennial flow. It was replaced with 023-WUGA.
- 396-OUGA – This site went dry in 2015 and could not be sampled for the WHM so was dropped again for 2020. It was replaced with 068-WUGA.

The final list of sites that will be sampled in 2020 for SAM are provided below. This final list includes 33 urban gradient sites plus 2 reference sites (Holder and Griffin) that Ecology's WHM program will be sampling in 2020. At the 2 reference sites USGS and the SAM program will collect data for continuous stage and temperature and sediment chemistry. Ecology's WHM program will sample all remaining parameters.

Final list of SAM sites for 2020			
Label	long	lat	stream name
BIO06600-HOLD02	-121.96807	47.43431	Holder Creek
SEN06600-GRIF09	-121.8864	47.60588	Griffin Creek
098-OUGA	-121.85184	47.7285	Stossel Creek
009-OUGA	-123.13834	48.02367	Canyon Creek
026-OUGA	-123.47257	48.09051	Tumwater Creek
008-OUGA	-121.93832	47.24308	Unnamed tributary
083-OUGA	-122.91392	47.42334	Stimson Creek
093-OUGA	-123.26124	48.05888	Pederson Creek
079-WUGA	-121.988577	47.885264	Unnamed tributary
104-OUGA	-122.681672	47.389153	Unnamed tributary
079-OUGA	-122.041333	47.927558	Unnamed tributary
034-WUGA	-122.126732	47.35755	Little Soos Creek
040-WUGA	-121.83674	47.53316	Kimball Creek
102-WUGA	-122.48325	48.71521	Padden Creek
055-WUGA	-122.18555	47.64008	Yarrow Creek
001-WUGA	-122.17056	47.56029	Coal Creek
087-WUGA	-123.06708	48.08485	Bell Creek
814-WUGA	-122.151759	47.685919	Unnamed tributary
376-OUGA	-122.581634	47.285092	Sullivan Gulch Creek
082-WUGA	-122.04271	47.54657	North Fork Issaquah Creek
030-WUGA	-122.63206	47.65162	Unnamed tributary
023-WUGA	-122.37148	47.24463	Wapato Creek
003-WUGA	-122.18783	47.77913	North Creek
042-WUGA	-122.36677	47.32259	Unnamed tributary
005-WUGA	-122.333499	47.253482	West Hylebos Creek
068-WUGA	-122.29921	47.88446	Unnamed tributary
093-WUGA	-122.17984	47.5137	Honey Dew Creek
009-WUGA	-122.25544	47.82499	Swamp Creek
002-WUGA	-122.315704	47.375533	McSorley Creek
158-WUGA	-122.14057	47.683219	Peters Creek
074-WUGA	-122.36585	47.75397	Boeing Creek
065-WUGA	-122.29354	47.95027	Unnamed tributary
048-WUGA	-122.26311	47.8035	Scriber Creek
050-WUGA	-122.27415	47.94141	Powdermill Creek
095-WUGA	-122.3249	47.4099	Des Moines Creek